**To:** Wilson, Kristina (DEQ)[WilsonK17@michigan.gov]
**From:** Burdick, Melanie
**Sent:** Mon 4/23/2018 2:05:48 PM
**Subject:** FW: Aquila Resources - Clarification

FYI: This e-mail is to clarify a response in Aquila's response to EPA's objection letter.

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**From:** Donohue, Steve [mailto:Steve.Donohue@Foth.com]
**Sent:** Monday, April 23, 2018 6:28 AM
**To:** Korleski, Christopher <korleski.christopher@epa.gov>
**Cc:** Barry Hildred (BHildred@aquilaresources.com) <BHildred@aquilaresources.com>; dennis donohue (ddonohue@wnj.com) <ddonohue@wnj.com>; Nimmer, Mike <Mike.Nimmer@Foth.com>; jking@king-macgregor.com
**Subject:** Aquila Resources - Clarification

Good morning Chris,

During the April 16, 2018 meeting, the EPA requested additional clarification to Aquila's response to Comment #4 in the March 8, 2018, EPA letter regarding the potential for Menominee River draw down. Aquila offers the following clarification to that response:

The estimate of 125,000 gpd (or 0.193 cubic feet per second [cfs]) of flow through the cut-off wall was a preliminary analytical estimate contained in what is referred to as the "Cut-off Wall Memorandum" prepared prior to preparation of the Michigan Department of Environmental Quality (MDEQ) Part 632 Mining Permit Application. As documented in the Groundwater Modeling Report that was submitted with the Part 632 permit application, actual groundwater modeling predicted the maximum pit in-flow to be approximately twice that amount, at 38 $m^3$/hr (0.370 cfs). While groundwater in-flow will occur around the entire pit circumference, the assumption that it could be entirely derived from the Menominee River provides for a conservative estimate with respect to potential drawdown effects on the river. As documented in the Groundwater Modeling Report, MDEQ Menominee River records show that the 90-day, 10-year low flow estimate in the River is 1,370 cfs. Therefore, the estimated flow into the pit (if conservatively assumed to come entirely from the Menominee River) would be equivalent to 0.027% of the 90-day, 10-year Menominee River low flow (i.e. 0.37 cfs / 1,370 cfs = 0.027%), a relatively negligible amount as compared to the total flow in the River, and therefore adverse drawdown impacts to the Menominee River are not anticipated.

Best regards,

Steve

**Stephen V. Donohue, PH**
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